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**Notice of Allowability**

Application No.

10/625,254

Examiner

James J. Leybourne

Applicant(s)

SINGER ET AL.

Art Unit

2881

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment received 1 October 2005.
2. ☒ The allowed claim(s) is/are 12-32.
3. ☒ The drawings filed on 23 July 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

### **DETAILED ACTION**

1. According to the "Amendment" received 10 January 2005, the specification has been amended; claims 1-11 have been canceled; claims 12, 21, 22, 29 and 30 have been amended and claims 31-32 have been added.

### ***Response to Arguments***

2. Applicant's Remarks received 15 November 2004 have been fully considered and are persuasive.

### ***Allowable Subject Matter***

3. Claims 12-32 are allowed.

4. The following is an examiner's statement of reasons for allowance:

Regarding independent claim 12, the prior art fails to disclose or make obvious a collector for light having a wavelength  $\leq 193$  nm comprising a first mirror shell adjacent to and positioned inside of a second mirror shell wherein said first and second mirror shell are rotationally symmetric and at least one of said first and second mirror shells includes a segment having a first optical surface and a second segment having a second optical surface and a component in a region between said first and second mirror shells wherein said region is not used by said light.

Claims 13-21 are allowed by virtue of their dependency on claim 12.

Regarding independent claim 22, the prior art fails to disclose or make obvious an illumination system for light having a wavelength  $\leq 193$  nm comprising a collector as disclosed in claim 12.

Claims 23-28 are allowed by virtue of their dependency on claim 22.

Regarding independent claim 29, the prior art fails to disclose or make obvious an EUV projection exposure facility for light having a wavelength  $\leq 193$  nm comprising a collector as disclosed in claim 12.

Regarding independent claim 30, the prior art fails to disclose or make obvious an method for manufacturing a microelectronic component comprising using an EUV projection exposure facility for light having a wavelength  $\leq 193$  nm comprising using an EUV projection exposure facility as disclosed in claim 29.

Regarding independent claim 31 the prior art fails to disclose or make obvious an illumination system for wavelengths  $\leq 193$  nm, comprising:

a light source; a plane to be illuminated; a collector having a first mirror shell adjacent to, and positioned inside of, a second mirror shell around a common axis of rotation, wherein said first and second mirror shells are rotationally symmetric; and a component in a region between said first and second mirror shells, wherein said collector is for receiving said light from said light source via an object-side aperture and for illuminating an area in said plane, and wherein said region is not used by said light;

a plane conjugated to said light source, between said collector and said plane to be illuminated, in which an intermediate image of said light source is formed;

and a diaphragm positioned in or near said intermediate image, that separates said illumination system into a first space and a second space, wherein said first space includes said light source and said collector.

Claim 32 is allowed by virtue of their dependency on claim 31.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James J. Leybourne whose telephone number is (571) 272-2478. The examiner can normally be reached on M-F 9:00- 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R Lee can be reached on (571) 272-2477. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 6, 2005  
JJL

  
JOHN R. LEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800